

Patent Claims

1. Device (10) for extruding plastic compounds, having at least one feed instrument (12) for feeding a compound through a channel (24a; 24b; 24c) to a die (14), a sensing instrument (60a; 60b; 60c) being provided at the channel (24a; 24b; 24c) or at the die (14) in order to determine at least one measured variable (P_a ; P_b ; P_c) related to the viscosity of the compound, characterised in that
 - 10 - the feed instrument (12) and the die (14) are configured in such a way that the feed instrument (12) has a delivery pressure which oscillates over time at a frequency, and
 - the die (14) has a flow resistance which oscillates at the same frequency.
- 15 2. Device according to Claim 1, characterised in that the measured variable is the pressure (p_a ; p_b ; p_c) of the compound.
3. Device according to Claim 1 or 2, characterised in that the measured variable is the flow 20 rate of the compound.
4. Device according to Claim 1, 2 or 3, characterised in that
 - the sensing instrument (60a; 60b; 60c) is operatively coupled to a control instrument (62), and
 - 25 - the control instrument (62) is capable of controlling the feed instrument (12), as a function of at least one measured value determined by the sensing instrument (60a; 60b; 60c), in such a way that the exit velocity (v_s) of the compound from the die (14) fluctuates minimally.
- 30 5. Device according to Claim 1, 2, 3 or 4,

characterised in that

- the device (10) comprises a transport instrument (16) for removing the compound extruded from the die (14),
- the sensing instrument (60a; 60b; 60c) is operatively coupled to a/the control instrument (62), and

5 the control instrument (62) is capable of controlling the transport instrument (16), as a function of at least one measured value determined by the sensing instrument (60a; 60b; 60c), in such a way that the transport velocity (10) (v_t) of the transport instrument (16) corresponds to the exit velocity (v_s) of the compound from the die (14).

6. Device according to Claim 1, 2, 3, 4 or 5, characterised in that

- the device (10) comprises a rotary instrument (26) having

15 at least one rotatable die (14),

- the sensing instrument (60a; 60b; 60c) is operatively coupled to a/the control instrument (62), and
- the control instrument (62) is capable of controlling the rotary instrument (26), as a function of at least one measured value determined by the sensing instrument

20 (60a; 60b; 60c), in such a way that the exit velocity (v_s) of the compound from the die (14) fluctuates minimally.

7. Device according to Claim 1, 2, 3, 4, 5 or 6, characterised in that

25 - a feed instrument (12) is connected through a plurality of channels (24a; 24b; 24c) to a die (14) having a plurality of outlet openings, and

- a sensing instrument (60a; 60b; 60c) is in each case arranged at the channels (24a; 24b; 24c) or at the outlet

30 openings of the die (14).

8. Device according to Claim 7,

characterised in that

- the sensing instruments (60a; 60b; 60c) are operatively coupled to a/the control instrument (62), and
- the control instrument (62) is capable of controlling the feed instrument (12), as a function of the measured values determined by the sensing instruments (60a; 60b; 60c), in such a way that the exit velocities of the individual compounds from the outlet openings of the die (14) fluctuate minimally relative to one another.

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